

CHL-102(C); S/N 10/790,647

*Amendment, responsive to
Non-final Office Action dated March 8, 2007
Page 11 of 17*

REMARKS

Claims 11, 18, 19, and 47 have been amended. Claims 48 and 49 have been newly added.

No added matter has been introduced. Claims 11, 16, 18, 19, and 47-49 are submitted for reconsideration.

Response to Restriction

Applicant's election of Group X in the reply filed on 01/31/07 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 81.03(a)).

Claims 11, 16, 18 and 19 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for other forms, does not reasonably provide enablement for the use of derivatives, analogs, solvates or polymorphs of formula (I) broadly. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make diverse derivatives, analogs, tautomeric forms, solvates or polymorphs and to use same prophylactically commensurate in scope with these claims. The claims, insofar as they embrace polymorphs, solvates, derivatives, analogs or tautomeric forms are not enabled.

Applicant respectfully disagrees with the Examiner's contention of non-enabled forms of compound structure (I) as all forms are within a non-inventive skill. However, in order to expedite the present prosecution base claim 11 have been amended.

Claims 18 and 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the Specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 18 recites a method of preventing diseases caused by impaired glucose intolerance, insulin resistance and diabetic complication. However, the specification only teaches the use of

CT01/HOPFIIA/231705.3

CHL-102(C); SN 10/790,647

*Amendment, responsive to
Non-final Office Action dated March 8, 2007
Page 12 of 17*

compounds of structural formula (I) for reducing the level of triglycerides, total cholesterol, LDL, VLDL and Increased HDL and lowered serum glucose levels on pages 80-83. Therefore, the specification is not adequately enabled for the scope of prevention embraced by the claims.

1) Nature of the invention.

The nature of the invention is the prevention of elevated cholesterol levels, lowdensity lipoproteins, triglycerides, Syndrome X, which is a cluster of factors for heart disease associated with insulin resistance, hypertriglycendemia (high blood lipid), diabetes complications, impaired glucose intolerance which is considered to be a stage in the development of type 2-diabetes and a risk factor for cardiovascular disease by employing the use of compounds of structural formula (I). As stated however, the claims are not enabled for the prevention of any of the cited diseases., to date, there are no known chemotherapeutic preventive agents recognized in the art for the conditions caused by impaired glucose tolerance such as diabetes, hypertension, strokes, and cardiovascular diseases or diabetic complications or insulin tolerance.

Applicant respectfully disagrees with the Examiner's reasons for rejection. On the contrary, the assertion that there no known chemotherapeutic preventive agents recognized in the art for the conditions caused by impaired glucose tolerance, is not grounds to deny efficacious utility to the instant compounds as claimed.

2) State of the prior art and the predictability or lack thereof in the art.

The state of the prior art involves screening *in vitro* and *in vivo* system to determine which compounds exhibited the desired pharmacological activities (i.e. what compounds can treat which specific disease). According to the Examiner, there is no absolute predictability even in view of the seemingly high level of skill in the art. The existence of these obstacles establishes

CT01/HOFFHA/231705.3

CHL-102(C); S/N 10/790,647

*Amendment, responsive to
Non-final Office Action dated March 8, 2007
Page 13 of 17*

that the contemporary knowledge in the art would prevent one of ordinary skill in the art from accepting any prophylactic regimen on its face.

Applicant traverses the Examiner's contention. On the contrary, one skilled in the would be likely to know that the instant compounds would yield a chemotherapeutic candidate for treating the claimed diseases as the instant compounds are found to have a LDL- lowering effect. Moreover, patentability does not presuppose FDA approval. In fact, the Examiner has not shown why one of ordinary skill would have difficulty in ascertaining the metes and bounds of the claims.

3) Quantity of experimentation needed to make or use the invention based on the content of the disclosure.

The quantity of experimentation needed is undue experimentation. One of ordinary skill in the art would need to determine which of the compounds of claim 11 would possess the activity necessary to prevent diseases associated with or caused by impaired glucose intolerance such as diabetes, hypertension, strokes, arteriosclerosis and cardiovascular diseases; insulin resistance diseases such as obesity and Syndrome X; or diabetic complications such as nerve damage, weight gain, blindness, blurred vision, slow healing and death.

Applicant disagrees. On the basis of the known relation of a diabetic condition to the predictable dire consequences of such indication, the ameliorating or preventative effect of the claimed treatment is predictable to one of skill without requirement of undue experimentation.

4) Level of predictability in the art.

The art pertaining to the prevention and/or treatment remains highly unpredictable. As disclosed above, there is no absolute predictability even in view of the seemingly high level of skill in the art. Many of the symptoms of the diseases may be treated, however, applicant has failed to provide sufficient evidence or to point out preventive measures recognized in the art at

CT01/HOFFHA/231705.3

CHL-102(C); SN 10/790,647

Amendment, responsive to
Non-final Office Action dated March 8, 2007
Page 14 of 17

the time the invention was made.

Applicant disagrees. On the contrary, the *in vitro* and *in vivo* efficacy of the specification reasonably supports the utility of the present invention. One of ordinary skill would know how to use the advantageous compounds.

5) Amount of direction and guidance provided by the inventor.

The amount of direction or guidance present is found on pages 80-83 of the specification where hPPAR α activity is provided. However, there is no clinical data or scientific data in the specification to controvert the findings in the art from which one can reasonably conclude that all of applicants' compounds possess all the preventive uses claimed herein. Where the assertion of utility is unusual, difficult to treat or speculative, the Examiner has the authority to require evidence that tests relied on are reasonably predictive of *in vivo* efficacy by those skilled in the art. See for example *In re Ruskin*, 148 USPQ, *Ex parte Jovanovics*, 211 USPQ 907. Also note MPEP .2164.05(a).

Applicant disagrees. In fact, the instant Specification discloses *in vitro* and *in vitro* testing for establishing the rank order of useful compounds regarding their particular pharmaceutical activity, determining the relative potency of the compounds. There is no clinical testing requirement except for FDA approval.

6) Existence of working examples.

As discussed above, working example is found on pages 80-83 of the specification where hPPAR α activity is provided. At best, the treatment currently asserted for the instant invention is the reduction of plasma glucose, triglycerides, cholesterol, LDL, VLDL and elevating HDL cholesterol levels and type 2-diabetes and not the prevention of any of these diseases.

Applicant disagrees. The Specification discloses at least 148 compounds which have been

CT01/HOFFHA/231705.3

CHL-102(C); SN 10/790,647

*Amendment, responsive to
Non-final Office Action dated March 8, 2007
Page 15 of 17*

tested as described. However, the Patent Act does not support a requirement that makes human testing a prerequisite to patentability in this case. Under no conceivable circumstance no deference is owed the Agency on a question of law.

7) Breadth of claims.

Additionally, claim 18 is extremely broad due to the vast number of possible diseases encompassed by the instant claim language.

Applicant asserts that the amended claim 18 is fully supported by the instant Specification.

8) Level of ordinary skill in the art.

The level of ordinary skill in the art is high. Due to the unpredictability in the pharmaceutical art, it is noted that each embodiment of the invention is required to be individually assessed for physiological activity by *in vitro* and *in vivo* screening to determine which compounds exhibit the desired pharmacological activity and which diseases would benefit from this activity.

Applicant disagrees, in fact, Applicant has satisfied a showing of the advantageous properties for *in vitro* and *in vitro* efficacy of the claimed compounds. The Examiner has supplied no evidence that the claimed compounds and method of use would not work.

Claim Rejections 35 USC § 112

Claim 47 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 47 improperly depends from a method claim.

Accordingly, Applicant has amended claim 47, defining all the substituents on structural formula (I).

CT01/HOFFHA/231705.3

CHL-102(C); S/N 10/790,647

Amendment, responsive to
Non-final Office Action dated March 8, 2007
Page 16 of 17

Double Patenting

Claims 18-19 and 47 are rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 and 13 of U.S. Patent number 6,987,123.

According to the Examiner's contention, one of ordinary skill in the art would have found the claimed compounds *prima facie* obvious, since the reference compounds generically embrace them. The skilled artisan would expect such structurally similar compounds to possess similar properties. Additionally, the Court stated in In re Payne et al., 606 F.2d 302, 203 USPQ at 255 (CCPA 1979). The Examiner further alleges citing In re Gyurik et al., 596 F.2d 1012, 201 USPQ 552 at 557: "...in obviousness rejections based in close similarity in chemical structure, the necessary motivation to make a claimed compound, and thus the *prima facie* case of obviousness, rises from the expectation that compounds similar in structure will have similar properties" in pharmaceutical industry.

Applicant respectfully notes that the Examiner has asserted apparently opposite positions by earlier alleging non-enablement under 35 USC 112, first paragraph, on the grounds at least in part that "[t]here is no absolute predictability even in view of the seemingly high level of skill in the art." However, in order to expedite the prosecution of the claimed invention to allowance, an executed terminal disclaimer is submitted herewith disclaiming .

CT01/HOFFHA/231705.3

CHL-102(C); S/N 10790,647

*Amendment, responsive to
Non-final Office Action dated March 8, 2007
Page 17 of 17*

CONCLUSIONS

An early notice of allowance in the next Office action is earnestly requested.

Respectfully submitted,

Date: July 9, 2007



Hans-Peter G. Hoffmann, PhD
Agent for Applicant, Reg. No. 37,352
Kelley Drye & Warren LLP
Two Stamford Plaza
281 Tresser Boulevard
Stamford, CT 06901
Tel.: 203-351-8011
Fax: (203) 327-2669
E-mail: hhoffmann@kelleydrye.com

CT01/HOFFHA/231703.3